

**MCV-300**

**VERTICAL  
MACHINING  
CENTER**



**LONG CHANG MACHINERY CO., LTD.**

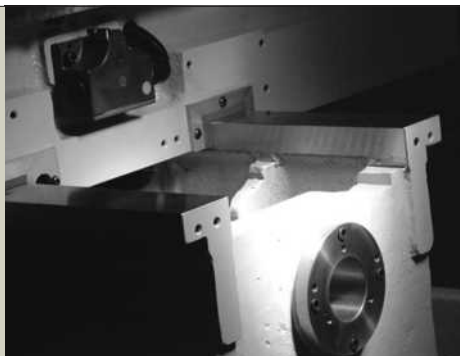
# MCV-300





#### ▲ CARTRIDGE SPINDLE

Well balanced, rigid and easy maintenance, which is built in temperature controlled environment. Spindle, bearings, housing and spacer is individually selected in-house before put it together. Each unit is running test to ensure performance and accuracy before being assembled into the machine.



#### ▲ RIGID BOX WAY

The sliding surfaces are coated with Turcite-B antifriction lining material. It is carefully hand scraped to achieve high accuracy and good retention of lubricating oil, essential for a long accurate life.



#### ▲ MEEHANITE CASTING STRUCTURE

Certified Meehanite cast iron formed a steady foundation as a rock. Heavy ribbed throughout for high rigidity and excellent mechanical and thermal stability.



#### ◀ AUTOMATIC TOOL CHANGER

The Armless type transmission mechanism provides rapid, stable and reliable tool change, also it is controlled by PLC software for quicker tool selection to reduce non-cutting time. The standard capacity is 10 tools, but could be optional with 16 tools or Arm-type with 24 tools.

#### ● FULL ENCLOSURE

Standard full enclosure, keep the working area safe and clean.



#### ◀ HEAVY LOAD TABLE

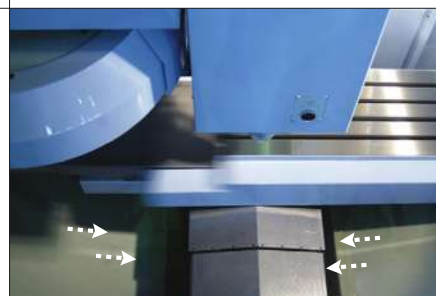
High rigid-design structure, and is with max. loading 350 kgs.

#### ● TOP OPEN FRONT DOOR

Operators can get closer to the table, which makes setup easier.

#### ● 12 MONTH WARRANTY

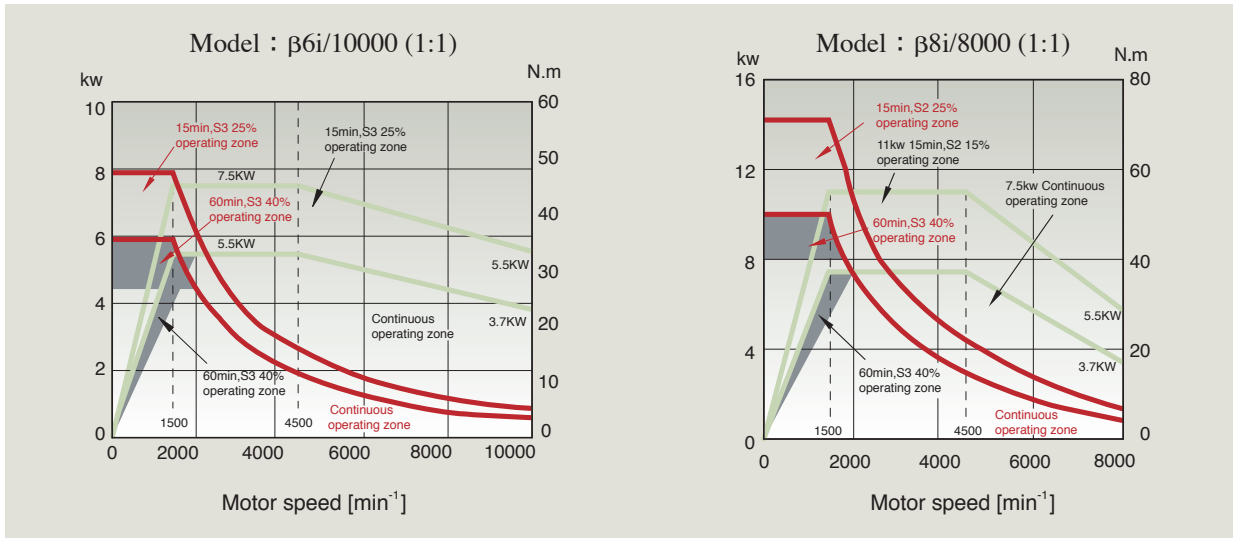
Standard.



#### ▲ CHIP FLUSH SYSTEM

A simple but efficient removal mechanism could be easily conveying chips outside the machine.

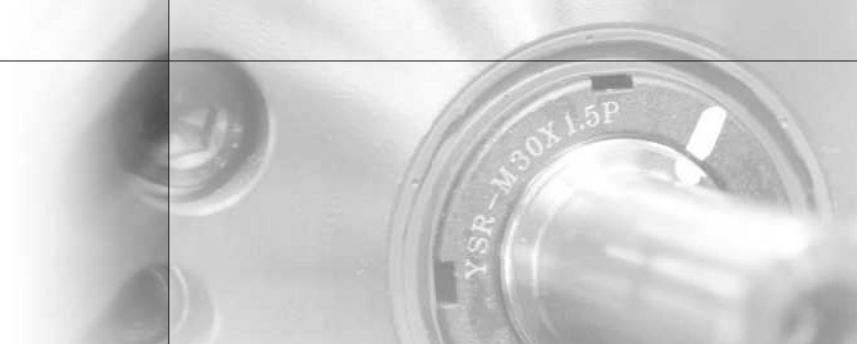
► **SPINDLE MOTOR OUTPUT/TORQUE CHARACTERISTIC**



► **IN-HOUSE MODERN MANUFACTURING FACILITIES.**

We have OKUMA 5-face machining center, TOYODA, TOSHIBA, MITSUI SEIKI Horizontal machining centers with pallet changers, OKUMA CNC lathes, Warner, OKUMA and TOYODA CNC grinders, for building the best machines, whole critical and precision parts are done in house. For inspection of machine accuracy, we use HP Laser, and Ballbar system to ensure the quality before shipment.





<b>Chip removal rate (cc/min)</b>						
<b>Cutting method</b>	<b>Spindle motor</b>	<b>Spindle speed</b>	<b>Cutting feedrate</b>	<b>Material</b>	<b>Chip removal rate</b>	<b>Test No.</b>
Face milling (Ø63x8T)	ANILAM SM055A (5.5 Kw)	1300	1650	S45C	206.25	93042101
Face milling (Ø63x8T)	SIEMENS IPH7103 (7/9.25 kW)	1300	1600	S45C	180	93110901
Face milling (Ø63x8T)	FANUC β6i / 10000 (5.5/7.5 kW)	1300	1260	S45C	157.5	93090101



#### **STANDARD ACCESSORIES**

- Armless type ATC (10 Tools)
- Fully enclosed splash guard
- Chip flush system
- Coolant system
- Coolant tank & chip collector
- Automatic lubrication system
- Telescopic covers
- Portable electronic handwheel (FANUC)
- Working light
- Alarm light
- Tool box
- Operator's manual and parts list
- Leveling bolts, pads and nuts



#### **OPTIONAL ACCESSORIES**

- Armless type ATC (16 Tools) or Arm type ATC (24 tools)
- High-speed Spindle 10,000 rpm
- Bigger spindle motor (7.5/11 kW)
- Spindle chiller
- Spiral or flat type chip conveyor
- 4th or 4+5th axis rotary table
- Working piece measurement system
- Tool length measurement system
- Heat exchanger on electrical cabinet
- Power transformer
- CE (Safety door interlock)

**Machine Specification****MCV300****Travel**

X-Axis	610 mm (24")
Y-Axis	305 mm (12")
Z-Axis	460 mm (18.1")
Spindle nose to table	70 530 mm (2.8 20.9")

**Table**

Table size	700 X 308 mm (27.6 12.1")
Floor to table	835 mm (32.9")
Max. table loading capacity	350 kgs (770Lbs)
T-slot (number x width x pitch)	4 X 16mm X 63.5 mm (4 X 0.6" X 2.5")
Spindle center to column	415 mm (16.3")

**Feed system**

Rapid traverse speed	X/Y: 20 M/min ( 787.4" / min) , Z:18 M/min (708.7" / min)
Feed motor (FANUC)	X/Y: 1.2kW (8Nm) , Z: 1.8kW (12Nm)
Ball screw diameter & pitch	32 mm / 10mm (1.3" / 0.4")
Cutting feed rate	110,000 mm / min (0.04 393.7")
Type of transmission	Direct mounting

**Spindle**

Type of tool shank	BT 40 / CAT 40 / DIN 69871A
Max. spindle speed	8,000 rpm / 10,000 rpm (Op)
Spindle motor	5.5 / 7.5 kW / 7.5 / 11 kW (Op)
Type of transmission	Belt

**ATC**

Tool storage capacity	10 tools	16 tools (Op)	24 tools (Op)
ATC type	Armless type		Arm type
Max. tool diameter	110 mm (4.3")	76 mm (3")	
Without adjacent tool	200 mm (7.9")	120 mm (4.7")	
Max. tool length	230 mm (9.1")	230 mm (9.1")	
Max. tool weight	8 kg (17Lbs)	7 Kg (15Lbs)	
Tool changing time (Tool to Tool)	7.5 sec	3.2 sec	
Tool changing time (Chip to Chip)	9.1 sec	5.5 sec	
Method of tool selection	By address code		random selection
	bi directional magazine rotation		
Tool display	Yes		
Special tool management	None	Yes	

**Coolant system**

Coolant tank size	160 L
Coolant capacity	150 L / min
Chip Flush capacity	Standard

**Machine size**

Machine height	2,400 mm (94.5")
Floor space	1,850 mm (72.8")(W) X 1,825 mm (71.9")(D)
weight	2,500 kgs (5500Lbs)

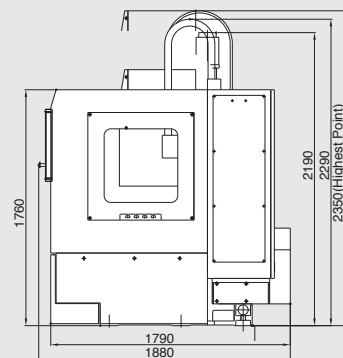
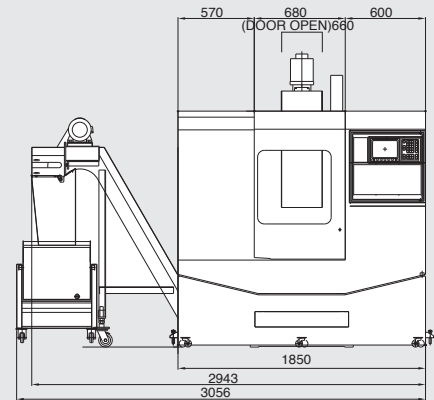
**Power source**

Electrical power supply	15 KVA/3PH · 220V 50/60HZ
Compressed air supply	6.0 kgf/cm <sup>2</sup> (85psi) (0.6MPa)

**Controller**

FANUC / HEIDENHAIN / SIEMENS

\* Specifications may different according to option accessories and are subject to change without notice. Edition / A02



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Distributed by:

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